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09/787,998	03/23/2001	Hirofumi Taketsu	2204-002012	1204

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EXAMINER

BLOUNT, STEVEN

ART UNIT PAPER NUMBER

2661

DATE MAILED: 01/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/787,998

Applicant(s)

Taketsu et al

Examiner

Blount

Group Art Unit

2661

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on 11/12/02
- ☐ This action is FINAL.
- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-7, 9-10 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-7, 9-10 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____
 - ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

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DETAILED ACTION

Claim Objections

1. Claim 6 is objected to because of the following informalities: there should be a space between the number 25, the word mass, and the % sign. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3, 5, 6, 7, and 9 are rejected under 35 U.S.C. 103(a) as being obvious over applicants admitted prior art (hereinafter referred to as AAPA) in view of U.S. patent 6,009,913 to Kojima et al.

With regard to claim 1, AAPA teaches, in the section labeled "Prior Art", page 2, lines 17 - page 3, lines 1 - 3 of the specification, that, "an *Al-coated steel sheet* to which an organic resin film is applied (hereinafter referred to as "an anti-corrosion painted steel sheet", as disclosed in JP-306637A, JP9-53166A) is proposed as a material for a *fuel tank* in order to eliminate the above mentioned problems...(beginning at line 28)...However, an Al plating layer formed on the steel sheet is inferior of anti-scratching property during press-working, so that substrate steel is

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often partially exposed to the outside when it is press-worked to upper and lower halves 2, 3" (emphasis added).

Therefore, AAPA does not teach a coating which is, as stated, ~~not~~ capable of protecting the fuel tank from scratches during its formation; nor does AAPA teach a coating which would be easily removable after the forming process.

Kojima et al teaches (col 6, lines 1+) that "when a resin coating is to be removed after hydroforming, a removable resin coating is used, a preferred removable coating is thermoplastic type and, *soluble in an alkali aqueous solution*" (emphasis added). Kojima also discloses the problem of scratching the material by the dies (again during a steel forming operation) which occurs during the high pressures encountered with hydroforming. See col 2 lines 27+ and col 3 lines 62+ which discuss a solution to this problem through the use of a "lubricating organic resin coating", wherein the resin coating is "*soluble in an alkali aqueous solution*" (col 6, lines 3 - 4 and col 14, paragraph 2).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have applied the alkali soluble organic resin film directly to the aluminum coated steel sheet-formed fuel tank in AAPA (and taught in 9142466, as mentioned in AAPA), in light of the teachings of Kojima, in order to protect the surface of the fuel tank from scratching during its formation by using a coating which will thereafter be easily removable.

With regard to claim 3, see col 6 of Kojima (K), lines 15 - 30.

With regard to claim 5, see table 2 of K, which discusses the use of urethane.

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With regard to claim 6, see page 3, lines 27+ of AAPA.

With regard to claim 7, see the various coating thicknesses in table 2 of K.

With regard to claim 9, the use of polyacrylic homopolymers is taught in col 6, lines 27+ of K.

4. Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being obvious over applicants admitted prior art (AAPA) in view of U.S. patent 6,009,913 to Kojima et al as applied to claim 1 above, and further in view of U.S. patent 5,234,974 to Calhoun et al.

With regard to claim 2, AAPA/Kojima teach the invention as described above, but do not explicitly teach the resin to be soluble in an alkali solution of pH 9.0 or Higher. The examiner believes that the pH used is a matter of design choice and that this large (and typical) range of values would be obvious in view of the teachings of Kojima and this design choice noted.

However, to further satisfy the requirements of 35 U.S.C. 103(a), the examiner has also provided the Calhoun reference, which teaches a somewhat similar situation in which the pH of the basic solution is "about 7.5 to 12.0". See col 6, lines 50+. It would have been obvious to one of ordinary skill in the art at the time of the invention to have used a pH of 9.0 or greater for the alkali liquid in AAPA/Kojima, in light of either the design choice noted or the teachings of Calhoun, in order to provide a solution that can more easily remove the protective organic coating.

With regard to claim 4, the use of an alkali metal in the solution is taught in col 5 lines 25+ (and throughout the patent) in Calhoun, and this would suggest the use of an alkali metal in

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the carboxyl group, wherein the amount of substitution for the hydrogen atom (ie, 1 - 50%) is a matter of design choice.

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being obvious over applicants admitted prior art (AAPA) in view of U.S. patent 6,009,913 to Kojima et al as applied to claim 1 above, and further in view of Japanese patent 410265967 to Teruaki et al.

AAPA/Kojima teach the invention as described above, but do not teach the use of 1 - 30% powdery silica. The use of silica is taught in Teruaki (2 - 13%), wherein a powdered form of it is commonly known, and also the amount used in Teruaki is similar to that claimed.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided the resin film of AAPA/Kojima with a powdery silica (1 - 30%), in light of the teachings of Teruaki et al, in order to make the resin evenly applicable to the surface.

Response to Arguments

6. Applicant's arguments with respect to claim have been considered but most are moot in view of the new ground(s) of rejection.

With regard to the statement that Calhoun "may be applied to floor tiles and countertops", the examiner responds that Calhoun states in col 1, lines 15+, that what is taught is a polymer coating that can be used in "a *variety of substrates* such as floor tiles, countertops, wall and shower tiles, and so forth" (emphasis added).

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Contact Information

7. Examiner Blount may be contacted at the Patent Office between the hours of 9:00 am to 5:30 P.M. Monday through Friday. His phone number is (703) 305-0319.



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1/25/03